BASF
We create chemistry

PROJECT PROFILE

Multi-Family Construction

OVERVIEW

When two different developers / builders in the Tucson area faced their own unique challenges while constructing new multi-family communities, they both found **ENERTITE®** open-cell spray polyurethane foam (SPF) insulation to be the solution. Its performance features, credentials and versatility make insulating with **ENERTITE** an easy choice for almost any residential or commercial application.

Through its air barrier performance, the **ENERTITE** insulation material pulls double duty, helping to eliminate the moisture and condensation issues that would typically occur with air permeable conventional insulations. ENERTITE solves the durability challenge for these builders, along with providing long-term consistent thermal performance over the life of the building, since the SPF material's R-value is unaffected by any air or moisture within this assembly. The homeowners and tenants benefit from a more efficient, comfortable living space, and the building owner has confidence in the long-term durability of the structure. Both projects retained a HERS Rater and utilized the Peformance Path for energy code compliance.

ENERTITE SPRAY FOAM FEATURES AND BENEFITS

- **Seamless, continuous layer provides reliable thermal performance**
  - R-value of 3.7 to 4.0 per inch
- **Open-cell structure offers:**
  - Excellent sound control
  - Effective noise absorption
- **Forms a complete air seal to maintain insulation performance in real-world conditions**
- **Water-based formulation with low global warming potential**
- **Environmentally responsible without compromising efficiency or comfort**

ENERTITE CREDENTIALS AND QUALIFICATIONS

- **Backed by a range of trusted certifications and performance credentials**
- **GREENGUARD Gold certified for low chemical emissions**
  - Supports healthier indoor air quality
- **UL Solutions validated for**
  - Mold resistance
  - VOC content
  - Bio-based material levels
- **ENERGY STAR certified insulation product**
  - Meets strict energy efficiency guidelines
- **Carries UL 263 hourly-rated fire approvals**
- **Delivers superior sound performance**
  - STC ratings of 57–59 in partition wall and floor/ceiling designs

Multi-family Construction - Marana, Arizona **-** 272 Units

CHALLENGE

When the builder / developer began planning this multi-family project in Marana, AZ, thermal and condensation control was a top priority. In the past, they had experienced roof damage around year 8, in their buildings with low-sloped roofs, where these attics were insulated with conventional products.

SOLUTION

ENERTITE open-cell SPF insulation was sprayed to the underside of the roof deck with open web trusses. This application provided the project both air sealing and thermal insulation benefits. Applying **ENERTITE** over the 2x4 top cord of the truss under the flat roof system provided an R-17 continuous insulation at the roof deck, exceeding the R-5 continuous minimum requirement as set in Table R806.5 of the 2018 IRC for Climate Zone 2. This added insulation also helps to prevent condensation and resulting challenges.

ENERTITE open-cell SPF field-applied directly between and over truss top cord

Multi-family Construction - Tucson, Arizona **-** 300 Units

CHALLENGE

During this build, the polyisocyanate board that was originally specified for continuous insulation on the low-sloped roof deck had supply challenges and long lead times that would delay construction.

SOLUTION

ENERTITE open-cell spray foam insulation was approved by the local building official as a replacement for R-38 fiberglass batts under deck insulation, with 1.0 inch polyiso board in the exterior roof system on top of open-web trusses. **ENERTITE** was installed in the roof decks of all units at R-22 based upon Performance Path compliance for both thermal and condensation control.

ENERTITE open-cell SPF directly applied to underside of the roof deck